



FEATURES & BENEFITS

- Superior bond strength
- Solvent Free
- No detectable VOC emissions
- Install up to 80% RH
- Made in the USA

VPI 155 Adhesive for ESD Tile

TECHNICAL DATA SHEET (TDS)

A two-part epoxy adhesive specially engineered for use below grade (porous or non-porous) and/or with heavy load traffic or heavy static loads such as hospital beds. Depending on conditions and application, spread rate is between 185-245 square feet. RH requirements are a maximum of 80% and a pH between 7-11.

Critical: Read the entire label before you use this product.

BEFORE YOU BEGIN

SUB-FLOOR PREPARATION: It is essential that the moisture test be performed on all concrete sub-floors regardless of the grade level or whether or not the concrete is freshly poured or is classified as an older slab. (It is important the pH level is between 7-11 when using VPI 155 adhesive.)

Moisture testing should be performed by ASTM F-2170 In Situ Relative Humidity Test. The moisture level should not exceed eighty (80) percent relative humidity.

If the test results exceed the limitations, the installation should not proceed until the problem has been corrected.

ADHESIVE BOND TEST: In addition to and not in lieu of the moisture test, perform the Adhesive Bond Test. In several locations throughout the area to receive the flooring, glue a 3' x 3' area of the flooring with the adhesive. Roll with a 150 LB. roller; allow to set for 72 hours. A sufficient amount of force should be required to remove the flooring. Take Notes of the process effects and clean up.

These tests are required for VPI 155 adhesive before a full Installation is done.

IMPORTANT: WITHOUT DATED DOCUMENTS SHOWING pH, RH, AND BOND PERFORMANCE TEST RESULTS, NO WARRANTY CLAIM WILL BE ACCEPTED FOR CONSIDERATION.

Additional information regarding the sub-floor installation and requirements can be found in ASTM F-710.

CONCRETE, TERRAZZO, CERAMIC: Sub-floors must be structurally sound, dry clean and free of dirt, dust, wax, grease, paint, polish, oil cutting compounds, sealers and all other materials that would interfere with a good adhesion. The floor surfaces must be smooth and flat with a maximum variation of 1/8" in 10 feet. All cracks, depressions, and imperfections must be repaired with a high-quality cementitious underlayment. All uncorrected sub-floor irregularities may telegraph through the Mohawk Group flooring and become visible on the surface of the finished installation.

GYPSUM-BASED UNDERLAYMENT PRODUCTS SHOULD NOT BE USED.

No Mohawk Group WARRANTY covers a floor failure due to emission from sub-floor or sub-floor movement, expansion, contraction, or settlement caused by any environmental conditions. New concrete must be properly cured. A drying time of one month per inch of concrete is generally required after the slab is poured and protected from the weather. Lightweight aggregate concrete floors, flooring with steel or plastic pan construction, and floors poured over a permanent moisture barrier usually requires an extended drying time, if lightweight aggregate concrete weights less than 90 pounds per cubic foot, a topping of regular concrete at least one inch thick is required. To expedite drying time, adequate heat and ventilation should be provided.

Additional information with regards to these tests and results can be obtained through Mohawk Group's Technical Services Department. If concrete surface is exceptionally smooth, it should be acid etched with a 15% solution of muriatic acid/ water before installing the floor. Neutralize the concrete after etching by rinsing with clear water to which a few ounces of ammonia has been added .

CERAMIC TILE: All ceramic tiles must be bonded securely to the substrate. Any loose tile must be removed. Clean existing ceramic tile using muriatic acid/water as directed. After floor has dried, apply a thin rich coat of Portland cementitious underlayment with a liquid latex binder to achieve a smooth surface.



TERRAZZO FLOORS: Inspect the terrazzo for any sealer or film on the surface. This must be removed before proceeding with the installation.

RADIANT HEAT: Tile may be installed on radiant-heated floors at 65°-75°F, as the standard operating setting. The use of excessive radiant heat nearing the upper limit of 90° F. can impact the performance and the adhesion of your floor.

WOOD FLOORS: Tile may be installed over existing sound, suspended plywood floors of double construction. DO NOT install directly over wood strip or plank sub-floors.

Prepare floors as followed:

1. Sub-floor must be solid, well nailed at the joints and free from flexibility. Missing or unsound boards must be replaced.
2. Install ¼" underlayment grade or exterior grade plywood or ¼" underlayment grade hardboard. If the floorboards are badly warped, use thicker plywood.
3. Fill all voids, cracks and seams with wood putty or equivalent fillers. Sand all irregularities, allowing any voids to remain may transfer through the tile and be visible on the surface of the new installation.

NOTE: Wood expansion or contraction will cause gapping, ridges, or possible loss of adhesion.

Mohawk Group RECOMMENDS: Any new concrete slabs on or below grade can be poured over a permanent moisture barrier consisting of a minimum six mil polyethylene film. Any concrete in contact with the earth or with less than 18" of cross-ventilated air space under it is considered to be on grade.

RESILIENT FLOORING: Do not install tile over any resilient floor covering on or below grade. Remove all the old floor covering and sand off all the adhesive. If a specific job condition necessitates the installation of the tile over resilient floor covering, use the following procedures:

1. Any floor covering must be sound and adhered tightly to the floor. Remove any loose or broken tiles and replace them with sound material or with a Portland cementitious underlayment with a liquid latex binder, which should also be used to level any floor irregularities and to fill any open seams.
2. Any texture or embossing in the original installation may transfer through the Mohawk Group tile and be visible on the surface of the new installation if not prepared properly.
3. Thoroughly sand the surface with coarse sandpaper using an edge sander next to the walls and in spots where a regular sander may have skipped. Completely remove all the old sealers and waxes to ensure a proper bond.
4. Thoroughly sweep, vacuum, and then damp mop the floor to remove any remaining dust and grit.

WARNING: Various government agencies have regulation governing the handling, removal and disposal of asbestos containing materials. If you intend to sand, remove, or dispose of an existing resilient floor covering, backing, lining felt, or adhesive

you should be aware that these products may contain asbestos fibers. Sanding, removal, and the disposal of asbestos containing material can place fine particles of asbestos in the air. It has been determined that the inhalation of free airborne asbestos fibers may be injurious to your health. Fines may be assessed against persons violating these regulations.

NOTE: Mohawk Group Resilient Floor Coverings and adhesives have never contained asbestos.

METAL DECKS: Metal decking must be smooth, dry, clean, and free from dust, paint, asphalt, old adhesives, grease, oil, rust and other extraneous material. Level all surface irregularities with a Portland Cementitious liquid latex underlayment. Priming the metal surface will result in better adhesion. Lightly sand the surface for better adhesion.

WORK BENCHES: Tile can be applied to either wood or metal work bench surfaces. The bench surface must be smooth, dry, clean and free from paint, oil grease and other extraneous material. Metal surfaces should be lightly sanded for better adhesion. Install tile in general accordance with the instructions under Adhesive Installation.

OTHER TYPES OF INSTALLATION: For recommended procedures on other types of installations not covered in these instructions, contact the manufacturer before installation commences.

LOT NUMBERS: Each production run of tile is assigned a lot number which appears on the carton label. Check lot numbers before installing the tile. Whenever possible, install the tile from the same lot number in a given room or area. When this is not possible, it is advisable to isolate the different lot numbers into separate areas. Because few rooms are perfect rectangles and the tile must be laid within a perfect rectangle, it is necessary to strike chalk lines at right angles to each other against which the tile can be laid.

GROUNDING SET UP REQUIREMENTS: Several acceptable methods are used to ground ESD Control Floors, depending on job conditions and/or personal preference. Two recommended procedures are described:

OPTION 1

Prior to installation of the static control flooring, the electrical contractor drops a wire (usually a #10 or #12 stranded) inside the wall from any convenient ground bus so that the wire emerges at the floor wall junction. A small hole is either cut into the drywall at this point or chipped out of the concrete floor.

The copper (2" x 24") grounding strip provided by Mohawk Group is intertwined with the stranded copper wire. The connection of grounding strip and copper wire is pushed into the depression and conductive adhesive is liberally applied so that the connection is completely buried. Then the adhesive and the depression is filled to the level of the floor or wall.

The balance of the grounding strip is then laid flat in conductive adhesive on the floor and covered with additional adhesive. The tile is then installed over the grounding strip.



OPTION 2

If there are exposed steel columns supporting the building, the ground connection may be made directly to the columns. The copper grounding strip is laid flat in the conductive adhesive on the floor allowing several inches to protrude at the junction next to the column. The grounding strip on the floor is covered with additional adhesive and Static Dilution or Static Accelerated tile installed over it. A hole is drilled into the steel column an inch or two up from the floor. Tap the hole and secure the grounding strip using a simple machine screw and washer. Make sure all paint and foreign substances have been removed from the column to assure good metal contact. Cover the connection with an electrical box.

Mohawk Group provides sufficient copper strip to allow one ground connection every 2,000 square feet of installed tile. Copper strip grids under the tile are unnecessary since the conductive adhesive acts as a conductive plate beneath the tile.

ADHESIVE APPLICATION TYPE: VPI is an integral component of the ESD control system. Use of non- VPI Conductive Adhesives will void Mohawk Group's Limited Warranty.

VPI 155 ADHESIVE: VPI 155 Adhesive has superior bond strength on, or above or below grade applications where moisture may be a concern.

CHARACTERISTICS: VPI 155 Epoxy adhesive is different from other adhesives; it does not develop tackiness as it sets up. This makes it extremely important to roll the floor as recommended to avoid raised edges or adhesion problems.

CLEAN UP: Promptly clean any adhesive smudges from the flooring material's surface with water while the adhesive is still fresh/wet. Clean tools with water while the adhesive is still fresh/wet. Clean with mineral spirits once dried. Use caution with mineral spirits, which may be harmful to some materials. Do not smear adhesive. Use Original Soft Scrub™ (Paste) to remove remaining stains of wet or cured adhesive. During initial maintenance, dry buff these areas with a red pad on a low- speed buffer to restore the factory finish.

SET-UP TIME: About 30 minutes, do not spread more than you can install in that time. Appearance is glossy when first spread and dulls as it sets up. Maximum open time: 30 minutes.

Exceeding the 30 minutes open time will lead to floor failures due to poor adhesion.

TROWEL TYPE: 1/32" x 1/16" x 1/32" U-Notched Trowel Never re-notch a trowel, the tines wear down reducing the amount of adhesive needed for a good adhesion to the product.

SURFACE TYPE: The Adhesive is good for Porous and Non-Porous areas.

COVERAGE: 185 - 245 sq. ft. per gal. depending on porosity of substrate, application style and environment.

In applications demonstrating spread rates that are less than 185 SF, additional adhesive should be purchased as required. RH≤80%, pH of 7-11.

VPI 155 TWO PART EPOXY ADHESIVE INSTALLATION INFORMATION:

- 1A. Prior to the installation, remove the cartons from the pallets, and place them on a flat floor surface with a room temperature between 65°F and 80°F degrees for a minimum of 48 hours.
- 1B. After acclimating, and prior to installation, wipe the back of the tile to remove any manufacturing residue or contaminants.
- 1C. "IMPORTANT" Before starting the installation and in order to reduce tile ledging and gapping, the general conditions (ambient temperature, slab temperature) at the time of installation should match the planned operational general conditions.
2. All sub-floors must be clean and dry, free of dust, dirt, wax, paint, grease, manufacturing residue or any other contaminants that might interfere with the adhesive bond.
3. Cracks and uneven surfaces must be filled with an approved cementitious based patching compound.
4. Pour Part B into Part A. Be sure to remove as much of Part B from the container as possible by placing cap on container and turning upside down to get any remaining material out. Material will flow into the cap. Mix in container provided only.
5. ESD floors must be grounded every 2,000 sq ft or each area if less than 2,000 sq ft. SEE GROUNDING SET UP REQUIREMENTS.
6. The adhesive should not be poured onto the floor until Parts A & B have been properly mixed together. Any unmixed portion applied to the sub-floor will not adhere and cause an adhesion floor failure.
7. Mix the combined Parts A & B using a slow speed drill (200 RPM's) and mixing paddle. Mix for 3 minutes. Do not mix at high speeds. This could cause the adhesive to start the curing process and shorten the open time. Extended mixing may adversely affect the adhesive. Be sure to mix the entire contents of the can. CAUTION: Adhesive will not cure if not properly mixed.
8. After a complete mixing, IMMEDIATELY pour the entire adhesive on the subfloor and spread as soon as possible. DO NOT allow the mixed adhesive to remain in the container. Keeping the trowel at a 45° angle, spread the adhesive in 3-foot-wide sections as close to but not over your chalk lines. If you occasionally cross the line with your trowel, do be concerned. Any adhesive over the edges of the line must be scraped up before the next row is installed to avoid (ledging) or high edges.
9. Install tile immediately over the prepared epoxy adhesive surface within the 10-30 minute working window. It is essential that the specified trowel (1/32" x 1/16" x 1/32" U-notched trowel) and roller be used. If the trowel notches are too large, too much adhesive will be used. This will result in excessive adhesive seepage at the seams and will cause the tile to float and shift. Clean up after installation is then very difficult. In addition, the seams will be ledged making them very noticeable and dirt catchers as well. Any delay in rolling the tile due to excessive adhesive seepage, will result in poor adhesive transfer to the back of the tile and adhesion failure. If the trowel notches are worn or too short the adhesive will be spread too thin resulting in adhesion failures too.



WORK OFF THE TILE WHEN EVER POSSIBLE: When laying individual tile, do not slide the tile in place. The correct procedure is to place a corner of the tile in place next to the adjoining tile, carefully guiding it in the proper position to set it in place. When necessary to work on the tile, avoid shifting by using a kneeling board and by cutting the tile to butt tightly at all wall junctions. Roll and cross roll the tile with a 150 LB. sectional roller immediately after the tile is laid. Roll a second time one hour later. Inspect the floor for raised edges one hour after a second rolling, if necessary, roll a third time. Use hand roller in the areas that can't be reached with a larger roller.

DISCARD WORN TROWELS: Please note that using unapproved adhesive will void any Exclusive Mohawk Group Warranty. Consult instructions for proper subfloor requirements before opening any adhesive. Open time, working time and cure time will be longer at lower temperatures, and will shorten at higher temperatures. Ensure that the installation is well lit to allow effective examination of the tile installed. If flash coving is desired, see special instruction under Flash Coving.

ADHESIVE APPLICATION TYPE: VPI 155 is an integral component of the ESD control system. The use of a non-Mohawk Group Conductive Adhesives will void Mohawk Group's Limited Warranty.